THE SUBMILLIMETER SPECTRUM OF NdO

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Gaseous NdO (natural isotopic composition) was prepared in a high temperature furnace, and rotational spectra were measured in the 600–650 GHz range. Transitions with J from 27 to 29 were observed in the ground and first few excited vibronic states. Spectra were modeled using Dunham theory for diatomic molocules. Ongoing work with other lanthanide oxides will also be discussed.